

### **REMARKS**

Claims 1-9 are pending. Claim 5 has been amended. Two parts of the specification has been amended to correct an inadvertent transposing error. The specification amendments are for clarification purposes only and not in response to any prior art rejection. No claims have been added. Reconsideration in light of the following remarks is respectfully requested.

### **CLAIM REJECTIONS - 35 U.S.C. §112**

**Claims 1-8 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This rejection is respectfully traversed.**

With regard to claims 1-8, the Office Action states:

Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

What does "thin" (claims 1 and 5, line 2 of each) mean? Are there certain operable thicknesses for the invention? Please clarify the claims.

In reviewing a claim for compliance with 35 U.S.C. 112, second paragraph, the examiner must consider the claim as a whole to determine whether the claim apprises one of ordinary skill in the art of its scope and, therefore, serves the notice function required by 35 U.S.C. 112, second paragraph. MPEP 2173.02; *See also, Solomon v. Kimberly-Clark Corp.*, 216 F.3d 1372, 1379, 55 USPQ2d 1279, 1283 (Fed. Cir. 2000). The claim limitation is sufficient to enable those skilled in the art to draw a line between embodiments falling within the scope of the claim and those which do not. *In re Marosi*, 710 F.2d 799, 802-03, 218 U.S.P.Q. 289, 292 (Fed. Cir. 1983). "Thin film" is a term of art well known to one of ordinary skill in the packaging art. In a packaging context, thin films are typically between about 0.25 and 3 mils thick. *See e.g., U.S. Pat. No. 6,569,506*, at col. 9, lines 26-28 (indicating a thin film is less than 3 mil, or even as thin as about 0.25 mil); *U.S. Pat. No. 5,859,145*, at col. 26, lines 41-43 (same); *U.S. Pat. No. 5,792,534*, at col. 4, lines 30-32 (same); and *U.S. Pat. No. 5,773,106*, at Col. 4, lines 34-35

(same). Applicant contends that this sampling demonstrates that the term "thin film" is a term that will enable one skilled in the art to draw a line between embodiments falling within the scope of the claim and those which do not. In light of the above remarks, the rejection for claims 1-8 is believed overcome. Applicant respectfully requests Examiner to withdraw the rejection.

**CLAIM REJECTIONS - 35 U.S.C. §103(a)**

Claims 1-9 are rejected under 35 U.S.C. §103(a) as being unpatentable over Buongiorno et al. (US 6,106,934) in view of Ito et al. (US 4,291,085). This rejection is respectfully traversed.

With regard to claims 1-9, the Office Action states:

Buongiorno teaches heat shrinkable multi-layer films (abstract) for packaging foods (col. 1, line 10) that contain two skin layers (col. 7, lines 21-23) and a core layer containing polypropylene (PP) (col. 7, lines 64-67).

It fails to teach  $\leq 2.5\%$  polyethylene (PE) or  $\leq 1\%$  polybutene (PB) in the PP layer.

Ito teaches food packaging (title) containing a sealable (abstract) PP layer that comprises blends of PP with PP or other polyolefins (col. 5, lines 41-59). The films are useful for food to be sterilized (abstract).

The patents are analogous because they both deal with food packaging.

It would have been obvious to one having ordinary skill in the art at the time that the invention was made to employ the PP-containing blends of Ito as the core layer in the films of Buongiorno is found in the Ito abstract, where the sterilizability of its films is taught.

It is deemed desirable to make food packaging sterilizable in order to facilitate the packaging and handling of various foods while address health problems.

In the absence of convincing objective evidence to the contrary, the selection of types of "other polyolefins" (i.e., PB resins) and

useful amounts of PE and/or PB resins are deemed obvious optimization. In re Peterson, 65 USPQ2d 1379 (FedCir 2003).

A *prima facie* case of obviousness is established when the teachings of the prior art itself suggest the claimed subject matter to a person of ordinary skill in the art. *In re Bell*, 991 F.2d 781, 783, 26 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1993). The present invention is directed towards a food package having a reduced permeability on a product side wall. One purpose of the present invention is to reduce migration of food product into the package wall.<sup>1</sup> According to Ito, some food substances require sterilization after the food has been packaged.<sup>2</sup> Unlike the present invention, Ito is directed towards minimizing migration of package wall materials into packaged foods during high-temperature, short time sterilization.<sup>3</sup> Thus, whereas the present invention is directed towards reducing permeability of the scalable, product side layer, to reduce migration of food product into the package wall, Ito is directed towards preventing the leaching of packaging materials into food product at high temperatures.

Buongiorno is directed towards a heat shrinkable film for packaging food products. In practice, the heat shrinkable film is wound around the article, sealed or clipped and shrunk according to conventional techniques (such as exposure to hot air or hot water).<sup>4</sup> One could envision this invention being useful for packaging, for example, beef jerky. Even if Buongiorno and Ito could be properly combined, the combination of Buongiorno and Ito would not form the presently claimed invention in claims 1-9. Instead, a combination of Buongiorno and Ito would result in a heat shrinkable package that prevents migration of packaging materials into a food product when the food product is exposed to heat for either heat shrinking (Buongiorno) or sterilization (Ito).

In *ex parte* examination of patent applications, the Patent Office bears the burden of establishing a *prima facie* case of obviousness. *In re Fritch*, 972 F.2d 1260, 1262, 23 U.S.P.Q.2d 1780, 1783 (Fed. Cir. 1992). A *prima facie* case of obviousness is established when the teachings of the prior art itself suggest the claimed subject matter to a person of ordinary skill in the art. *In re Bell*, 991 F.2d 781, 783, 26 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1993). The initial burden is on the

<sup>1</sup> Original application, page 2, lines 3-6.

<sup>2</sup> Ito, col. 1 at lines 10-17; col. 1, lines 26-28

<sup>3</sup> See Ito, column 5, lines 6-40.

<sup>4</sup> See Buongiorno et al, col. 11, lines 37-40.

Examiner to provide some suggestion of the desirability of doing what the inventor has done. M.P.E.P. 706.02(j). A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antoine*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977). The problem addressed is not the sterilizability of food packaging as Examiner suggests, but rather the migration of food product, such as oil, into the packaging film that results from the extended shelf life that packaging material now provides. Thus, it was first necessary to recognize that the permeability of the thin film must vary to minimize migration of food product into the package wall before experimentation could take place to find the optimum chemical formula ranges. Thus, the combination of Buongiorno and Ito does not disclose the claimed invention in claims 1-9 nor does the combination suggest the modifications necessary to make the claims obvious.

Moreover, as discussed above, the present invention discloses that food product migration occurs at the product side of the package. The cited prior art combination fails to teach or suggest a heat sealable first thin film forming the product side of a wall of a food package to minimize migration of food product into the package wall.

For example, Buongiorno and Ito both fail to suggest or teach a product side "thin film comprising a sealant layer . . . comprising polypropylene, no more than 2.5 percent by weight polyethylene, and no more than 1 percent by weight polybutene" as required by claims 1-4. In fact, Buongiorno teaches using an ethylene/alpha-olefin C<sub>4</sub>-C<sub>12</sub> copolymer blend.<sup>5</sup> Polypropylene, a component of the claimed invention, is clearly excluded from the teaching of Buongiorno. Unlike the present invention which teaches using polypropylene in the sealant layer, Buongiorno clearly teaches away from using polypropylene in the sealant layer.

Moreover, Buongiorno and Ito both fail to suggest or teach a product side "thin film comprising a sealant layer . . . comprising polypropylene, and one other polymer constituent, wherein said other polymer constituent is polyethylene or polybutene" as required by claims 5-8. Ito teaches using a modified polypropylene having a co-polymer blend of between 2% and 10% by weight.<sup>6</sup> The polypropylene is modified, in part, by a corona discharge treatment.<sup>7</sup> Corona

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<sup>5</sup> See Buongiorno et al, col. 9, lines 19-24.

<sup>6</sup> See Ito, col. 5, lines 41-56.

<sup>7</sup> See Ito, col. 7, lines 53-55.

discharge treatments are used to increase the surface energy of a film. Ito teaches using a polypropylene film having a surface tension of at least 38 dynes/cm.<sup>8</sup> It is applicant's contention that a higher surface tension in the product side package wall of a package increases food product migration into the product-side package wall. Thus, the disclosure of the corona treated polypropylene in Ito teaches away from the applicant's invention of using specific blends comprising polypropylene to retard the absorption of product oils by the package wall.

In addition, Buongiorno and Ito both fail to suggest or teach a product side having "a sealant layer in contact with food inside said package, said sealant layer consisting essentially of polypropylene and a melting point depressing polymer component, wherein said melting point depressing polymer component is one of (i) polybutene, (ii) polyethylene, (iii) about 5 percent by layer weight polyethylene and less than 1 percent by layer weight polybutene, or (iv) about 2 percent by layer weight polybutene and less than 2.5 percent by layer weight polyethylene" as required by claim 9.

In light of the above remarks, the rejection for claims 1-9 is believed overcome.

Applicant respectfully requests Examiner to withdraw the rejection.

**Claims 1-2, 4-6 and 8-9 are rejected under 35 U.S.C. §103(a) as being unpatentable over Buongiorno et al. (US 6,106,934) in view of JP 11292992A (abstract). This rejection is respectfully traversed.**

With regard to claims 1-2, 4-6 and 8-9, the Office Action states:

Buongiorno is discussed above. It fails to teach the use of <2.5% PE blended with PP.

JP 11292992A (JP 992) teaches sealant layers for food packaging films (title) that contain PP and PE blends (novelty section). The sealant layers give films with excellent heat resistance (title, advantage section).

The references are analogous because they both deal with food packaging films.

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<sup>8</sup> See, e.g. Ito, col. 6, line 15; Ito abstract.

It would have been obvious to one having ordinary skill in the art at the time that the invention was made to employ the blends of JP 992 in the films of Buongiorno in order to make them more heat resistant.

The motivation to employ the blends of JP 992 in the films of Buongiorno is found in the title and advantage section of JP 992.

It is deemed desirable to make food packaging that has heat resistance so that the packaging may be sterilized and/or useful for cook-in containers.

In the absence of convincing objective evidence to the contrary, the selection of useful amounts of PE is deemed obvious optimization. *In re Peterson*, 65 USPQ2d 1379 (FedCir 2003).

As discussed above, a particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antoine*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977). The problem addressed is not the heat resistance of food packaging as Examiner suggests, but rather the migration of food product, such as oil from snack food products, into the packaging film that results from the extended shelf life that packaging material now provides. Thus, it was first necessary to recognize that the permeability of the thin film must vary to minimize migration of food product into the package wall before experimentation could take place to find the optimum chemical formula ranges. Applicant contends that one having ordinary skill in the art would not employ the blends of JP 992 in the films of Buongiorno to make a sealant layer less permeable to food products as the present invention teaches.

JP 992 discloses a sealant film having between 70% and 98% linear low density polyethylene.<sup>9</sup> Hence, very little polypropylene is used. Buongiorno

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<sup>9</sup> JP 11292992A (Advantage section).

teaches a skin layer using an ethylene/alpha-olefin C<sub>4</sub>-C<sub>12</sub> copolymer blend.<sup>10</sup> Such blend contains no polypropylene. Applicant has amended independent claim 5 to better clarify the amount of polypropylene comprising the sealant layer. As a result, the cited references teach away the claimed limitations required by claims 5-8, which requires the sealant layer to comprise at least 93% polypropylene.

In addition, the combination of JP 992 and Buongiorno clearly teaches away from the present invention, which limits polyethylene to a maximum of about 5.0% by weight as required by claim 9 and to less than about 2.5% by weight in claims 1-4, and 6.<sup>11</sup>

Moreover, Even if Buongiorno and JP 992 could be properly combined, the combination of Buongiorno and JP 992 would not form the presently claimed invention in claims 1-9. Instead, a combination of Buongiorno and JP 992 would result in a heat shrinkable package that would be more difficult to seal because of the heat resistant packaging taught by JP 992.<sup>12</sup> Additionally, the combination of Buongiorno and JP 992 would result in a sealant layer comprising more polyethylene than polypropylene.

In light of the above remarks, the rejection for claims 1-2, 4-6 and 8-9 is believed overcome. Applicant respectfully requests Examiner to withdraw the rejection.

<sup>10</sup> See Buongiorno et al, col. 9, lines 19-24.

<sup>11</sup> Original application, claim 1 and claim 6.

<sup>12</sup> JP 11292992A (Advantage section).

**CONCLUSION**


In light of the amendments and the arguments made by Applicants above, Applicants submit that all existing claims are now in a condition for allowance. Applicants respectfully request that Examiner withdraw all rejections with regard to the above-referenced claims in reliance on one or more of the grounds submitted by Applicants.

If there are any outstanding issues that the Examiner feels may be resolved by way of a telephone conference, the Examiner is cordially invited to contact Chad Walter or Colin P. Cahoon at 972-367-2001.

The Commissioner is hereby authorized to charge any additional payments that may be due or credit any overpayment to Deposit Account 50-0392.

Respectfully submitted,

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